AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Currently Amended) A method of guaranteeing users' anonymity in a wireless Local Area Network (LAN) system, the method comprising:

(a) creating a ~~plurality of~~ temporary address set[[sets]] by randomly transforming a unique Media Access Control (MAC) address of a wireless terminal, and transmitting the~~each~~ temporary address set to the ~~corresponding~~ wireless terminal; and

(b) performing data packet transmissions between the[[a]] wireless terminal and a wireless access node using a temporary address selected from the temporary address set corresponding to the wireless terminal as a source address or a destination ~~address.~~address, wherein in (a), the wireless access node encodes the temporary address set using a predetermined encryption key for the temporary address set, and transmits the encoded temporary address set to the wireless terminal.

2. (Currently Amended) The method as claimed in claim 1, wherein in (a), the wireless access node creates the temporary address set,~~sets, each of~~ which consists of N ~~(~~ ~~where~~(where N is an integer greater than or equal to two) temporary addresses using a MAC address contained in an access or authentication request message transmitted from the~~a~~ ~~corresponding~~ wireless terminal.

3. (Cancelled)

4. (Currently Amended) The method as claimed in claim 1,~~claim 3,~~ wherein each encryption key is created upon authentication of the ~~corresponding~~ wireless terminal.

5. (Currently Amended) The method as claimed in claim 1, wherein (b) further comprises:

(b1) a first addressing, which is performed in the wireless access node, and generates a destination address by randomly selecting, as the destination address, a temporary address ~~as a destination address randomly selected~~ from the temporary address set of the~~corresponding to a~~ wireless terminal after the wireless terminal has requested authentication.~~terminal that is requesting authentication.~~

6. (Currently Amended) The method as claimed in claim 5, wherein (b) further comprises:

(b2) a second addressing, which is performed in the wireless terminal, and generates a source address by randomly selecting, as the source address, a temporary address ~~as a source address randomly selected~~ from the temporary address set of ~~corresponding to~~ the wireless terminal.

7. (Previously Presented) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 1.

8. (Currently Amended) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 2.~~claim 3.~~

9. (Previously Presented) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 6.

10. (Currently Amended) A wireless Local Area Network (LAN) system of guaranteeing users' anonymity comprising:

at least one wireless terminal; and

a wireless access node adapted to create~~node, which creates~~ a temporary address set~~sets~~ by randomly transforming a unique Media Access Control (MAC) address of [[a]] wireless terminal, and use~~uses~~ a temporary address selected from the~~each~~ temporary address set as a destination address,~~address; and~~

wherein the wireless terminal is adapted to receive the~~at least one wireless terminal, which receives a~~ temporary address set corresponding to the[[a]] unique MAC address thereof ~~from among the plurality of temporary address sets created in the wireless access node, and uses~~, and use a temporary address selected from the received temporary address set as a source ~~address.~~address, wherein the wireless access node encodes the temporary address set using a predetermined encryption key for the address set, and respectively transmits the encoded temporary address set to the wireless terminal.

11. (Currently Amended) The system as claimed in claim 10, wherein the wireless access node creates the temporary address set,~~sets, each of~~ which consists of N (where N is an integer greater than or equal to two) temporary addresses using~~addresses, using for each address set~~ the MAC address contained in an access or authentication request message transmitted from the ~~corresponding~~ wireless terminal.

12. (Cancelled)

13. (Currently Amended) The system as claimed in claim 10,~~claim 12,~~ wherein the~~each~~ encryption key is created upon authentication of the ~~corresponding~~ wireless terminal.

14. (Currently Amended) The system as claimed in claim 10, wherein the wireless LAN system includes a plurality of wireless terminals each having a respective unique MAC address and the wireless access node is adapted to create a respective temporary address set for each of the plurality of wireless terminals, each of the temporary address sets being created by randomly transforming the respective unique MAC address of the corresponding wireless terminal, and the wireless access node comprises:

a first memory adapted to store~~memory, which stores~~ the ~~plurality of~~ temporary address sets, each of which consists of N (where N is an integer greater than or equal to two) random addresses;~~addresses and is created corresponding to a unique MAC address;~~

a first MAC address filter adapted to filter~~filter, which filters a~~ one of the respective unique MAC addresses~~address~~ from a source address of a data packet received from one of the wireless terminals ~~a corresponding wireless terminal~~ by referring to the temporary address sets stored in the first memory;

a destination address generation ~~unit, which enables~~unit adapted to enable a respective one of the temporary address sets ~~a temporary address set~~ corresponding to the filtered unique MAC address of the wireless terminal having requested ~~requesting~~ authentication from among the temporary address sets stored in the first memory, and generate~~generates~~ a first random selection signal; and~~signal, generates a temporary address randomly selected from the enabled temporary address set, and uses the temporary address as a destination address; and~~

a first random selection unit adapted to receive the first random selection signal from the destination address generation unit, randomly select one of the random addresses~~which randomly selects a temporary address~~ from the temporary address set enabled in the first memory according to the first random selection signal generated in the destination address

generation unit, and outputoutputs the selected randomtemporary address to the destination address generation unit, wherein the destination address generation unit uses the selected random address as a respective destination address.unit.

15. (Currently Amended) The system as claimed in claim 14, wherein at least one of the plurality of the wireless terminalsterminal comprises:

a second memory adapted to receive and store the respective one of the temporary address sets corresponding to the unique MAC address thereof which receives a temporary address set from the wireless access node;node and stores the temporary address set corresponding to a unique MAC address of the wireless terminal;

a second MAC address filter adapted to determinewhich determines whether a destination address of a data packet received from the wireless access node is included in the respective one of the temporary address sets that is set by referring to the temporary address set stored in the second memory, and generategenerates a receipt enable signal according to a determination result;

a source address generation unit adapted to generateunit, which generates a second random selection signal according to a source address request signal; andsignal, generates a temporary address randomly selected from the temporary address set stored in the second memory, and uses the temporary address as a source address; and

a second random selection unit whichunit adapted to randomly select one of the random addresses selects a temporary address from the respective one of the temporary address setsets stored in the second memory according to the second random selection signal generated in the source address generation unit, and outputoutputs the selected randomtemporary address to the source address generation unit, wherein the source address generation unit uses the selected random address as a respective source address.unit.

16. (Currently Amended) A wireless access node of guaranteeing users' anonymity comprising:

a ~~memory, which stores~~memory adapted to receive and store a plurality of temporary address sets, each of which consists of N (where N is an integer greater than or equal to two) random addresses and is created by randomly transforming a unique MAC address of a wireless terminal; and

a destination address generation ~~unit, which enables~~unit adapted to enable a temporary address set corresponding to the unique MAC address of the wireless terminal requesting authentication from among the temporary address sets stored in the memory, generate~~generates~~ a temporary address randomly selected from the enabled temporary address set, and use~~uses~~ the temporary address as a destination address, wherein the temporary address set is encoded using a predetermined encryption key for the temporary address set, and the encoded temporary address set is transmitted to the wireless terminal.~~address.~~

17. (Currently Amended) The wireless access node claimed in claim 16 further comprising:

an MAC address filter adapted to filter~~filter, which filters~~ the unique MAC address from a source address of a data packet received from a corresponding wireless terminal by referring to the temporary address sets stored in the memory.

18. (Currently Amended) The wireless access node claimed in claim 17 further comprising:

a random selection unit adapted to randomly selectunit, which randomly selects a temporary address from the temporary address set enabled in the memory according to a random selection signal, and outputoutputs the selected temporary address to the destination address generation unit.

19. (Currently Amended) A wireless terminal of guaranteeing users' anonymity comprising:

a memory adapted to receive and storememory, which receives a temporary address set,set created by randomly transforming a unique MAC address of the wireless terminal and encoded using a predetermined encryption key for the temporary address set, from a wireless access node, and storestores the temporary address set; and

a source address generation unit adapted to generateunit, which generates a temporary address randomly selected from the temporary address set stored in the memory, and useuses the temporary address as a source address.

20. (Currently Amended) The wireless terminal claimed in claim 19 further comprising:

an MAC address filter adapted to determinewhich determines whether a destination address of a data packet received from the wireless access node is included in the temporary address set by referring to the temporary address set stored in the memory, and generategenerates a receipt enable signal according to a determination result.

21. (Currently Amended) The wireless terminal claimed in claim 20 further comprising:

a random selection unit adapted to randomly select~~which randomly selects~~ a temporary address from the temporary address set stored in the memory according to a random selection signal generated from a source address request signal, and output~~outputs~~ the selected temporary address to the source address generation unit.